

CLAIMS

1. A mobile network system comprising a home network to which mobile terminal equipment users subscribe, and a foreign network other than the home network, and a network management system for making a resource management of the whole network and which is connected to said home network, said home network having:

a home agent apparatus having a home address corresponding to said mobile terminal equipment and relaying a packet transmitted from a correspondent node to said mobile terminal equipment; and

a home server apparatus for managing an authentication, authorization and accounting concerning said home network; said foreign network having:

a foreign agent apparatus for relaying said packet transferred from said home agent apparatus to said mobile terminal equipment; and

a foreign server apparatus for managing the authentication, authorization and accounting concerning said foreign network;

wherein by transmitting a registration request message containing service content changing information from said mobile terminal equipment to said foreign agent apparatus, service control information concerning said mobile terminal equipment which is possessed by each of said foreign agent apparatus, said foreign server apparatus, said home server apparatus, said home agent apparatus and said correspondent node which exist on a communication path between said mobile terminal equipment and said correspondent node is updated.

2. A mobile network system comprising a home network to which mobile terminal equipment users subscribe, and a foreign network other than the home network, and a network management

system for making a resource management of the whole network and which is connected to said home network, said home network having:

a home agent apparatus having a home address corresponding to said mobile terminal equipment and relaying a packet transmitted from a correspondent node to said mobile terminal equipment; and

a home server apparatus for managing an authentication, authorization and accounting concerning said home network; said foreign network having:

a foreign agent apparatus for relaying the packet transferred from said home agent apparatus to said mobile terminal equipment; and

a foreign server apparatus for managing the authentication, authorization and accounting concerning said foreign network;

wherein by making a request of changing a service content from said network management system to said home server apparatus, service control information concerning said mobile terminal equipment which is possessed by each of said foreign agent apparatus, said foreign server apparatus, said home server apparatus, said home agent apparatus and said correspondent node which exist on a communication path between said mobile terminal equipment and said correspondent node is updated.

3. The mobile network system according to claim 1, wherein said home server apparatus has an access right to a service information database for storing the present service content information for every mobile terminal equipment, and when the registration request message is transmitted from said mobile terminal equipment, the service content information stored in said service information database is changed within a range of

service contents stipulated by contract for said mobile terminal equipment.

4. The mobile network system according to claim 1, wherein said home server apparatus has an access right to a service information database for storing the present service content information for every mobile terminal equipment, and when the registration request message is transmitted from said mobile terminal equipment, a negotiation is made with said network management system, if the service content information to be changed exceeds the range of service contents stipulated by contract for said mobile terminal equipment.

5. The mobile network system according to claim 3, wherein said home server apparatus enables said mobile terminal equipment to effect an initial location registration procedure with the aim at changing the service control information at a moment when the service content information stored in said service information database is changed.

6. The mobile network system according to claim 5, wherein upon receiving a predetermined message corresponding to said initial location registration procedure, said home server apparatus updates the service control information that is possessed by each of said foreign agent apparatus, said foreign server apparatus, said home server apparatus, said home agent apparatus, and said correspondent node which are present on the communication path between said mobile terminal equipment and said correspondent node on the basis of the service content information after change that is stored in said service information database.

7. The mobile network system according to claim 6, wherein said home agent apparatus has a list of addresses for the correspondent nodes that become a communication partner, and

said home server apparatus updates the service control information for one or more correspondent nodes contained in this list.

8. The mobile network system according to claim 7, wherein said home agent apparatus adds the address of a correspondent node that has newly communicated with said mobile terminal equipment to said list dynamically, and sets the service control information to the newly added correspondent node.

9. The mobile network system according to claim 1, wherein said home agent apparatus has a list of addresses for the correspondent nodes that become a communication partner, and said home server apparatus sets binding cache information indicating a connecting state between said mobile terminal equipment and said home agent apparatus to said correspondent nodes contained in said list, in an initial registration phase process of said mobile terminal equipment.

10. The mobile network system according to claim 9, wherein said home agent apparatus instructs all the correspondent nodes contained in said list to reset the binding cache information, when said foreign network to which said mobile terminal equipment is connected is changed.

11. The mobile network system according to claim 7, wherein said home agent apparatus deletes the unnecessary addresses of said correspondent nodes from said list by performing an aging process.

12. The mobile network system according to claim 9, wherein said home agent apparatus deletes the unnecessary addresses of said correspondent nodes from said list by performing an aging process.

13. The mobile network system according to claim 7, wherein a predetermined response message to be transmitted when the

processing in said correspondent nodes contained in said list is ended to said home agent apparatus is omitted.

14. The mobile network system according to claim 9, wherein a predetermined response message to be transmitted when the processing in said correspondent nodes contained in said list is ended to said home agent apparatus is omitted.

15. The mobile network system according to claim 1, wherein said mobile terminal equipment allows reference by indication to the content of the service control information set for each mobile terminal equipment on the basis of a registration response message transmitted from said foreign agent in correspondence to said registration request message.

16. A method for changing service control information in a mobile network, comprising the steps of:

changing the service control information of a user that is managed in a home network to which the user of the mobile terminal equipment subscribes when the mobile terminal equipment is present in a foreign network other than said home network;

transmitting a registration request message to said home network, after changing said service control information;

transmitting the service control information after change from said home network having received said registration request message to said foreign network where said mobile terminal equipment is present; and

receiving a service based on said service control information after change at said mobile terminal equipment in said foreign network.